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ABSTRACT

This study examined concurrent and long-term effects of parents' teaching strategies on their children's cognitive styles. A total of 83 mothers and 74 fathers helped their 4-year-old sons or daughters with 4 problem-solving tasks. The interactions between parents and children were observed and evaluated. Two measures of field dependence-independence (FDI) were administered when the children were 4, 7, 11, and 14 years of age. There were distinctive differences in parental teaching strategies, depending on the child's FDI status. Parents of field-independent children granted them autonomy in the task and helped with the cognitive aspects of the task. A positive emotional ambience characterized the teaching situation. Parents of field-dependent children were rigidly controlling and quite critical of their children's performance. Outcomes for father-son and father-daughter pairings were comparable, but the mother-son dyad generated more powerful effects than the mother-daughter dyad. The effects held across the 10-year period. Appended are three references and related materials. (GLR)

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The Relation between the Teaching Strategies of Parents and the Cognitive Style of Their Children

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ABSTRACT

A total of 83 mothers and 74 fathers worked with their respective 4-year-old sons or daughters on four problem-solving tasks. Observers evaluated the interaction between parent and child with a 49-item teaching strategy Q-sort (TSQ). As measures of field dependence-independence (FDI), the RFT and the EFT were administered when the children were 4, 7, 11, and 14 years of age, thus permitting an examination of concurrent and long-term effects (up to 10 years). Distinctive differences in parental teaching strategies were observed contingent on the child's FDI status. Parents of FI children granted them autonomy in the task and assisted with the cognitive aspects of the task. A positive emotional ambience characterized the teaching situation. Parents of FD children were rigidly controlling and quite critical of their children's performance. Effects of gender were noted--whereas the outcome for the father-son and father-daughter pairing were comparable, the mother-son dyad generated more powerful effects than were observed in the mother-daughter dyad.

AIMS

1. To extend prior research (Kogan & Block, 1991) on the influence of child-rearing beliefs and practices on the cognitive style of field dependence-independence (FDI). Whereas this earlier work focused on parental *verbal* reports of their socialization practices, the present research is concerned with the parent's *behavior* vis-a-vis their children as judged by observers. Such behavior is observed in the context of the dyadic interaction between parent and child as the latter works on problem-solving tasks.

2. Given the location of the present research within an extended longitudinal framework, we propose to examine both concurrent and long-term effects. Does the parental behavior in the teaching context assessed when the child is 4 years of age relate to FDI assessment exclusively at age 4, or are the relations maintained when the children reach the ages of 7, 11, and 14?

3. With both mothers and fathers participating in the study in interaction with sons or daughters, it is possible to examine the impact of same-sex and cross-sex parent-offspring interaction on the link to FDI.

4. Kogan and Block (1991) demonstrated striking differences between the parents of FD and FI children in their self-ascribed pattern of child-rearing beliefs and practices. In broad terms, the distinction concerns a FD pattern of harsh control and affect suppression as opposed to a FI pattern of regulated autonomy and affective support. Will this difference be manifested in the course of dyadic interaction between parent and child?

METHOD

Subjects: A total of 83 mothers and 74 fathers, and their respective 4-year-old sons or daughters participated in the research. The subjects were drawn from the long-term longitudinal study outlined in Block and Block (1980).

Procedure: Four tasks were employed, two convergent and two divergent in nature. These were presented to the child for solution, with the parent instructed to provide whatever help the child needed to complete the tasks. The parent-child interaction was observed through a one-way mirror by at least two observers who completed a 49-item teaching-strategy Q-sort (TSQ) at the conclusion of a session.

The Portable Rod-and-Frame Test (RFT) was administered when the children were 4, 7, 11, and 14 years of age. Age-appropriate versions of the Embedded Figures Test (EFT) were also administered--the Preschool Embedded Figures Test at age 4, the Children's Embedded Figures Test at ages 7 and 11, and the adult version of the EFT at age 14.

Analysis: Q-sort ratings from multiple observers were averaged to yield mean values for each TSQ item.

For the FDI measures, in addition to the separate RFT and EFT scores, a composite of the two was also computed. Significant relations shown in the tables may be based on the separate measures and/or on the composite.

RESULTS

1. For parents and their FI children, 15 of the 49 TSQ items yielded significant relationships, 4 items for both mothers and fathers, 7 items exclusively for mothers, and 4 items exclusively for fathers. For mothers, effects are somewhat stronger for sons relative to daughters (24 vs. 10 significant r's). For fathers, effects are of approximately equal strength in sons and daughters (13 vs. 16 significant r's).

Examination of the items significant for both parents points to a good working relation between parent and child--the parent offering praise, support, and encouragement, while trying to maintain a low-pressure atmosphere. In the case of the father-exclusive items, there is the indication that he helps by clarifying the cognitive aspects of the problem for the child. The mother also provides such cognitive support, and encourages the child's independence as well. There is some suggestion of conflict, however, in the mother's surrendering control of the situation to the child and avoiding confrontation with the child.

2. For parents and their FD children, 12 of the 49 TSQ items yielded significant relationships, 4 items for both mothers and fathers, 6 items exclusively for mothers, and 2 items exclusively for fathers. For mothers, effects are considerably stronger for sons relative to daughters (30 vs. 3 significant r's). For fathers, effects are slightly stronger for daughters relative to sons (16 vs. 10 significant r's).

Examination of the items significant for both parents reveals mothers and fathers who are frustrated by their inability to find a helpful strategy for their child, yet compete with and put pressure on the child, and express impatience with the child's problem-solving efforts. Note, however, that these effects are virtually absent in the mother-daughter dyad. For father-exclusive items, we observe that fathers seem confused in the

task situation (especially with sons), and are overly invested in the child's performance (especially with daughters). For mother-exclusive items, where significant relationships are largely confined to sons, the picture is one of an impulsive physical intrusion into the child's ongoing problem-solving activity. It is as if the mother assumes complete control, rejecting the child's ideas and suggestions out of hand. Indeed, the mother manifests a lack of pride in the child and is even ashamed of the child.

3. The effects hold concurrently and predictively across the 10-year period at issue. The number of significant effects across FD and FI for ages 4, 7, 11, and 14 are 30, 38, 31, and 23, respectively. The somewhat weaker concurrent effect at age 4 relative to the age 7 outcome may simply reflect the lower reliability of the FDI measures at the former age. The subsequent weakening of the effect at ages 11 and 14 may have its origins in the enhanced unpredictability that comes with the passage of time and its concomitant events.

4. Parental and offspring gender operate as moderator variables influencing the extent of the relation between FDI status and parental teaching strategies. The TSQ evaluation of mothers has clear implications for the FDI status of their sons, but has little bearing on the FDI status of their daughters. On the other hand, father TSQs are associated with the FDI levels of both sons and daughters.

CONCLUSIONS

1. Within the tradition of research on FDI, the Witkin group (e.g., Witkin & Goodenough, 1981) offered the strong claim that parental child-rearing practices had a direct impact upon the development of that cognitive style. Practices encouraging of autonomy are presumed to foster FI; practices encouraging reliance on parental authority are presumed to enhance FD in the child. In broad outline. these presumptions were confirmed at the level of verbally expressed beliefs and practices in the longitudinal data reported by Kogan and Block (1991). The present research indicates that a further extension of the FD-FI difference to observed parental behavior in a teaching context can be justified.

2. Although the present data are of a longitudinal nature, we cannot make the claim that the parental teaching strategies exert a causal influence on the child's FDI level. In fact, one can argue that it is the distinctive problem-solving behaviors of FI and FD children that bring about the parental responses reflected in the TSQ ratings. We doubt, however, that this latter interpretation represents a complete rendering. Our earlier research demonstrated that these parents in the Q-sorts of their child-rearing beliefs and practices endorsed distinctly different items contingent upon the FI or FD status of their child. Many of these items concerned ideological beliefs about child rearing, and hence were not likely to represent a reactive response to the child's behavior. These beliefs were often centered around control for parents of FD children, and around the granting of autonomy for parents of FI children. We are suggesting, then, that the parents bring their respective child-rearing ideologies to bear in the experimental teaching context. Hence, it is no coincidence that the TSQ items distinguishing parents of FDs are heavily oriented toward rigid control of the child in the teaching situation, whereas the TSQ items attributed to the parents of FIs are characterized by encouragement of the child's autonomy and a more

relaxed, funlike ambience.

3. The child's gender seems to be a powerful moderator of the association between mothers' teaching strategy and the child's FDI status. For both FD and FI offspring, effects are considerably stronger for sons than for daughters. Earlier (Kogan and Block, 1991), we observed that mothers in their child-rearing Q-sorts were ambivalent about their FI daughters (relative to FI sons) and were disappointed with their FD sons (relative to their FD daughters). Both of these tendencies could serve to vitiate effects for the mother-daughter in comparison with the mother-son dyad.

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TABLE 1

Parents and Their FI Children: A Longitudinal Summary of the Teaching Strategies Q-sort (TSQ) Items Positively Correlated with FI

TSQ Items (effects for both parents)	Mothers: Boys Aged 4	7	11	14	Mothers: Girls Aged 4	7	11	14	Fathers: Boys Aged 4	7	11	14	Fathers: Girls Aged 4	7	11	14
P praises child	+		x		x								x	x	x	x
P supports, encourages child in situation		x	x										x	x	x	x
P has good working relationship with child	x	+	x			x			x	+	+	+		x	x	
P makes situation fun, not grim		x	x					+	x				x			
(effects for mothers)																
P is responsive to child's momentary needs	x	x			x	x	+	x								
P encourages child to proceed independently	x	x	x			x		+								
P emphasizes principles, strategies	x	+	x													
Child appears to enjoy situation		x	x													
P derives pleasure from being with child		x						x								
P surrenders control of situation to child		x		x												
P avoids confrontation with child		x	x													
(effects for fathers)																
P has clear coherent teaching style									x		+	x				x
P gives child reasons and explanations									+	x				x		+
P attends to cognitive elements									x	+		x				
P is spontaneous with child														x	x	

+ Significance at the .10 level
x Significance at the .05 level or better

TABLE 2

Parents and Their FD Children: A Longitudinal Summary of the Teaching Strategies Q-sort (TSQ) Items Positively Correlated with FD

TSQ Items (effects for both parents)	Mothers: Boys Aged 4	7	11	14	Mothers: Girls Aged 4	7	11	14	Fathers: Boys Aged 4	7	11	14	Fathers: Girls Aged 4	7	11	14
P frustrated by failure to find strategy	x	x	x			x			x	x		x	x	x		+
P pressures child to work at tasks		x	x						+				x	+	x	x
P is impatient with child		x	x	+					x				x	+		+
P and child compete	x	x	x	+					x				+		x	
(effects for mothers)																
P communicates via physical means	x	x	x	x												
P intrudes physically into tasks	+	x	x	x				+								
P becomes involved in situation		x	x	x												
P expresses needs directly, undercontrolled	x		x	x												
P lacks pride in child, ashamed of child		x	x			x										
P rejects child's ideas and suggestions		x	x													
(effects for fathers)																
P confused regarding what is expected in situation									+	x	x	x		+		
P overly invested in child's performance													x		x	x

+ Significance at the .10 level
x Significance at the .05 level or better